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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,249	08/03/2001	Jong Myeong Kim	KIMJ3008/REF	6264
7590 12/13/2005			EXAMINER	
Bacon & Thomas 625 Slaters Lane 4th Floor Alexandria, VA 22314-1176			JONES, PRENELL P	
			ART UNIT	PAPER NUMBER
			2668	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/890,249

Applicant(s)

KIM ET AL.

Examiner

Prenell P. Jones

Art Unit

2668

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-12 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, in line 4, Applicant is claiming "***a pair of said signals,***" which is unclear as to exact what pair of "said signals" Applicant is referring to. In addition, in lines 4, 5 and 6, Applicant is claiming "***complex valued signals,***" which is also unclear as to what Applicant is claiming.

***Claim Objections***

4. Claims 1-6 are objected to because of the following informalities: Regarding claim 1, Applicant is claiming in line 6, Applicant is claiming "signals signals," which Examiner believes is a typo. Claims 2-6 depend on claim 1, so claims 2-6 are objected to as well. Appropriate correction is required.

***Allowable Subject Matter***

1. Claims 7-12 are allowed over prior art.
2. The following is an examiner's reasons for indicating allowable subject matter:

Although the cited art discloses improving the transmission of spread spectrum wherein the architecture includes transmission and receiving data as associated in an CDMA environment, a plurality of code channels associated with code symbols, multiple carrier scheme, spread spectrum technique of CDMA, multiple spread spectrum signals transmitted on a plurality of frequencies, Walsh symbol generators outputs spreading sequence that is orthogonal to spreading sequences, scrambling sequence provided by PN generators, performing orthogonal spreading and scrambling in accordance with PN sequences, modulated data from scramblers is provided to multiplexer, which directs data to a summer, and resultant signals are carried on carriers, reducing spreading code interference as associated in a spread spectrum CDMA environment wherein the architecture includes establishing a composite signal by summing spreading signals via an arithmetic unit, modulators generating spread spectrum signals, different data rates wherein a spread-spectrum processor generates pilot-code signals, several information signals having different information, transmitting/receiving apparatus, they fail to teach or suggest with regards to claim 7, de-spreading a de-scrambled signal using a synchronized identical orthogonal code of a transmitter for each channel, a spreading de-modulator that includes a scrambling code generator and complex-domain multiplying means for de-scrambling low-pass filtered demodulated signal, with regard to claim 10, a complex-domain multiplying means for performing the first orthogonal complex-domain spreading with inputs of the transmitting data of the supplementary channels and the orthogonal variable spreading factor, with respect to claim 11, complex-scrambling steps for improving peak-to-average power ratio, a spreading de-modulator comprising a scrambling code generator and complex-domain multiplier for correcting the phase of the de-spread signal.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones 

December 2, 2005

  
CHIEH M. FAN  
SUPERVISORY PATENT EXAMINER